*भारतीय मानक*

*Indian Standard*

**IS 3025 (Part 8) : 2023**

# जल एवं अपशिष्ट जल के नमूने लेने और परीक्षण (भौतिक एवं रसायन) की पद्धतियाँ

## भाग 8 स्वाद रेटिंग

*( दूसरा पुनरीक्षण )*

# Methods of Sampling and Test (Physical and Chemical) for Water and Wastewater

## Part 8 Taste Rating

*( Second Revision )*

ICS 13.060.60

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Water Quality Sectional Committee, CHD 36

FOREWORD

This Indian Standard (Part 8) (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Water Quality Sectional Committee and approved by the Chemical Division Council.

When the purpose of the test is to estimate taste acceptability, the taste rating procedure should be followed. The test may be used with water samples from public sources, in laboratory research and consumer surveys in order to recommend standards governing mineral content in drinking water.

The Technical Committee responsible for formulation of IS 3025 : 1964 ‘Methods of sampling and test (physical and chemical) for water used in industry’ decided to revise the standard and publish it in separate parts. This standard was one among the different parts published under IS 3025 series of standards. The first revision of this standard was published in 1984.

In this second revision following changes have been incorporated:

a) Requirements for selection of Panel members is also incorporated;
b) References, ICS No. have been updated; and
c) Other editorial changes have been done to bring the standard in the latest style and format of Indian Standards.

In the preparation of this standard, considerable assistance has been derived from the method 2160 C of — Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, Washington, USA, 23nd Edition, 2017.

The composition of the committee responsible for formulation of this standard is listed in Annex-A.

In reporting the results of a test or analysis in accordance with this standard, if the final value observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’.

*Indian Standard*

# METHODS OF SAMPLING AND TEST (PHYSICAL AND CHEMICAL) FOR WATER AND WASTEWATER

## PART 8 TASTE RATING

*( Second Revision )*

### 1 SCOPE

This standard (Part 8) prescribes a method for taste rating of water. This method is applicable only to water and not to waste water.

### 2 REFERENCES

The following standard listed below contain provisions which through reference in this text constitute provisions of this standard. At the time of publications, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below:

| *IS No.* | *Title* |
|---|---|
| IS 3025 (Part 6) : 2018 | Methods of sampling and test (physical and chemical) for water and waste water: Part 6 Odour threshold (*second revision*) |

### 3 PRINCIPLE

Each panelist (tester) is presented with a list of nine statements about the water, ranging from very favourable to very unfavourable. The tester selects a statement that best expresses his opinion. The scored rating is the scale number of the statement selected. The panel rating is the arithmetic mean of the scale numbers of all testers.

### 4 APPARATUS

#### 4.1 Tasting

Present each sample to the observer in a clean 50 ml beaker filled to the 30 ml level.

#### 4.2 Temperature Control

Temperature of the samples shall be such that the observers find it pleasant for drinking. Maintain this temperature by a water-bath. A temperature of 15 °C is recommended but in any case do not allow it to exceed 27 °C.

#### 4.3 Sample Bottles,

Glass bottles with glass or polytetrafluroethylene lined closures.

### 5 REAGENTS

**5.1** Sample for flavour test should be safe for ingestion

**5.2** Taste and odour-free water, *see* **6.1** of IS 3025 (Part 6) and a 2 000 mg/l solution of sodium chloride prepared with taste and odour-free water as reference sample.

### 6 PROCEDURE

**6.1** For test efficiency, a single rating session may contain up to 10 samples, including the reference samples given in **5.2**. Observers should work alone after receiving thorough instructions and trial or orientation sessions followed by questions and discussion of procedures. Select panel members on the basis of performance in trial sessions.

It is necessary to ensure that the following conditions are met while selecting the Panel members:

a) Panel members shall not to be suffering from any ailments that affect their perception of taste, such as cold, fever etc.;

b) Panel members should not be on any medication since certain medicines may affect the taste perception; and

c) Panel members shall not engage in drinking (except water), and eating from 30 min before and during the testing.

**6.2** The temperature of test sample is recommended to be 15 °C, but in any case it should not exceed beyond the tap water temperature customary at the time of test. Test temperature need to be reported in the result. Independently randomize sample order for each judge, and instruct each to rate the samples as follows:

a) Initially taste about half of the sample by taking the water into the mouth, holding it for several seconds, and discharging it without swallowing;

b) Form an initial judgement on the rating scale;

c) Make a second tasting the same manner as the first session;

d) Make a final-rating for the sample and record the results in the appropriate data form;

e) Rinse the mouth with taste-and odour-free water; and

f) Rest for one minute before repeating steps (a) to (e) on the next sample.

**6.3** Allow 30 min of rest between repeated rating sessions. The observers should not know the composition or source of specific samples.

## 7 RATING SCALE

**7.1** Use the scale given at **7.2** for rating and record ratings as integers ranging from one to nine, with one given the highest quality rating.

### 7.2 Action Tendency Scale

a) I would be very happy to accept this water as my everyday drinking water;

b) I would be happy to accept this water as my everyday drinking water;

c) I am sure that I could accept this water as my everyday drinking water;

d) I could accept this water as my everyday drinking water;

e) May be I could accept this water as my everyday drinking water;

f) I do not think I could accept this water as my everyday drinking water;

g) I cannot accept this water as my everyday drinking water;

h) I could never drink this water; and

j) I cannot take this water in my mouth and I could never drink it.

## 8 CALCULATION

Calculate the mean and standard deviation of all rating given to each sample. Report the temperature at which the sample is tested.

## ANNEX A
(*Foreword*)

## COMMITTEE COMPOSITION

Water Quality Sectional Committee, CHD 36

| *Organization* | *Representative(s)* |
|---|---|
| Chief Scientist, EPTRI, Hyderabad | Shri N. Raveendhar **(*Chairperson*)** |
| Andhra Pradesh Pollution Control Board, Vijaywada | Shrimati M. Sreeranjani<br>Shrimati A. Sri Samyuktha (*Alternate*) |
| Bhabha Atomic Research Centre, Mumbai | Dr S. K. Sahu<br>Shri I. V. Saradhi (*Alternate*) |
| Central Institute of Mining and Fuel Research, Dhanbad | Dr Bably Prasad<br>Dr Abhay Kumar Singh (*Alternate*) |
| Central Pollution Control Board, New Delhi | Shri P. K. Mishra<br>Shri Vishal Gandhi (*Alternate*) |
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| Envirocare Laboratories Pvt Ltd, Thane | Dr Priti Amritkar<br>Shri Nilesh Amritkar (*Alternate*) |
| Bureau of Indian Standards, New Delhi | Ms Nitasha Doger |
| Gujarat Pollution Control Board, Gandhinagar | Dr D. N. Vansadia<br>Shri K. B. Vaghela (*Alternate*) |
| Haryana State Pollution Control Board | Shri Jatinder Pal Singh |
| Himachal Pradesh State Pollution Control Board, Govt of Himachal Pradesh | Dr T. B. Singh<br>Er Praveen Gupta (*Alternate*) |
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| Indian Chemical Council, Mumbai | Shri J. I. Sevak<br>Dr Mritunjay Chaubey (*Alternate* I)<br>Dr N. D. Gangal (*Alternate* II) |
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| Indian Institute of Toxicology Research, Lucknow | Dr S. C. Barman<br>Dr Satyakam Patnaik (*Alternate*) |
| Indian Water Works Association | Shri Vijay Charhate |

| *Organization* | *Representative(s)* |
|---|---|
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| Maharashtra State Pollution Control Board, Mumbai | Dr V. R. Thakur<br>Shri S. C. Kollur (*Alternate*) |
| Ministry of Environment and Forest & Climate Change | Dr Sonu Singh |
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| Uttar Pradesh Pollution Control Board | Dr Arunima Bajpai |
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This Indian Standard has been developed from Doc No.: CHD 36 (21397).

## Amendments Issued Since Publication

| Amend No. | Date of Issue | Text Affected |
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